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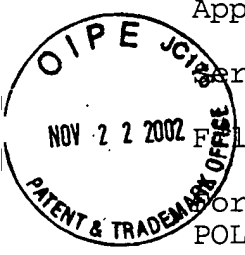
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Patent

#28

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): A. M.-E. Lafuente et al) Re: Information Disclosure  
Statement  
Serial No.: 09/299,539 ) Group: 1755  
Filed: April 26, 1999 ) Examiner: J. Pasterczyk  
For: "CATALYTIC SYSTEMS FOR THE ) Our Ref: B-3643 617072-2  
POLYMERIZATION AND..." )  
Date: November 22, 2002



Hon. Commissioner of Patents and Trademarks  
Washington, D.C. 20231

EXPRESS MAIL CERTIFICATE

"Express Mail" label number EL457692772US

Date of Deposit: November 22, 2002

I hereby certify that the following attached papers:

- postcard
- Information Disclosure Statement, including cover letter (3 pages), Form PTO-1449 (modified) (4 pages), and a copy of each document that is listed on Form PTO-1449 (modified),

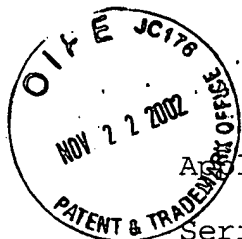
are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Alexis Karriker

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(Signature)

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Sir:

In accordance with the Applicants' duty to disclose information which may be material to the examination of this application, the undersigned respectfully requests that the Examiner consider on the merits the documents listed on the enclosed Form PTO-1449 (modified) before issuing the next Office Action on the merits. We are enclosing herewith a copy of each document that is listed on the enclosed Form PTO-1449 (modified).

The filing of this Information Disclosure Statement (IDS) shall not be construed as a representation that a search has been made (37 C.F.R. 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The documents German Patent DE 10 22 382 published January, 1958, and "Zur Kinetik der Niederdruckpolymerisation von Äthylen mit löslichen Ziegler-Katalysatoren" by K. H. Reichert et al., listed on the enclosed form PTO-1449 (modified), are in the German language. A concise English-language explanation of the relevance of these German-language documents is set forth below:

Organocomplexes of elements belonging to group IV, in combination with alkylaluminoxanes and/or boron compounds, lead to the formation of polymerization catalysts, whose activities are sometimes better than those obtained with the typical Ziegler-Natta catalysts.

It is known that homogeneous catalytic systems present a disadvantage: when they are used in suspension polymerization processes, a part of the produced polymer adheres to the reactor walls; this effect is technically

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called "reactor fouling." Besides, in most cases, the particle size of the obtained polymer is very small; and the apparent density is low. Thus the industrial production is reduced. In order to prevent the reactor from fouling and to control the size and the morphology of the polymer particles which are formed, the homogeneous system can be supported on an inorganic oxide. Recently, three different preparatory strategies have been used in order to reach this aim: cocatalyst heterogenization, metallocene heterogenization or heterogenization of both components on a fit support.

The document German Patent DE 26 08 863 C2 published on August 9, 1977, listed on the enclosed form PTO-1449 (modified), is in the German language. A concise English-language explanation of the relevance of this German-language document is set forth below:

German Patent No. DE 26 08 863 describes the use of bis(cyclopentadienyl) titanium dialkyl in combination with trialkylaluminum and a controlled amount of water.

If this IDS is being submitted before the issuance of a Final Rejection or Notice of Allowance, then the Commissioner is authorized to charge Deposit Account No. 12-0415 \$180.00 (or any other required amount), which is the fee set forth in 37 C.F.R. § 1.97(c); and this IDS should be fully considered on the merits, in accordance with 37 C.F.R. § 1.97(d). If this IDS is being submitted after the issuance of a Final Rejection or Notice of Allowance, then the Commissioner is not authorized to charge \$180.00 to Deposit Account No. 12-0415.

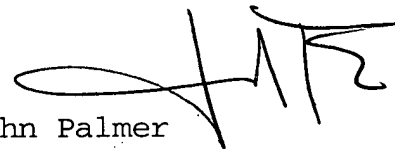
The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. (Notice of January 9, 1992, 1135 O.G. 13-25, at 25.)

The person making this statement is the practitioner who signs below on the basis of information supplied by an individual

Information Disclosure Statement  
USSN 09/299,539  
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associated with the filing and prosecution of this application  
(37C.F.R. § 1.56(c)) and on the basis of information in the  
practitioner's file.

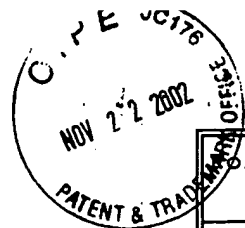
Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'J. Palmer', is written over the typed name.

John Palmer  
Attorney for Applicant  
Reg. No. 36,885

LADAS & PARRY  
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Form PTO-1449 (modified) (4 pages)  
A copy of each document that is listed on Form PTO-  
1449 (modified)  
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Form PTO-1449 (Modified)	ATTY DOCKET NO. B-3643 617072-2	U.S. SERIAL NO. 09/299,539
LIST OF PATENTS AND PUBLICATIONS STATEMENT  Page 1 of 4	APPLICANT(S) A. M.-E. Lafuente, et al.	
	FILING DATE April 26, 1999	GROUP 1755

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE or 102(e) DATE IF APPROPRIATE
	USSN: 08/961,347		Royo et al.			10/30/1997
	USSN: 08/961,956		Royo et al.			10/31/1997
	USSN: 09/300,302		Llinas et al.			4/27/1999
	3,184,416	5/18/1965	Mottus	252	429	
	3,440,237	4/22/1969	Mottus	260	94.9	
	4,542,199	11/17/1985	Kaminsky et al.	526	160	
	4,939,217	7/3/1990	Stricklen	526	114	
	5,057,475	10/15/1991	Canich et al.	502	104	
	5,064,797	11/12/1991	Stricklen	502	111	
	5,391,789	2/21/1995	Rohrmann	556	11	
	5,416,228	5/16/1995	Ewen et al.	556	7	
	5,466,766	11/14/1995	Patsidis et al.	526	129	
	5,504,232	4/2/1996	Winter et al.	556	7	
	5,627,246	5/6/1997	Langhauser et al.	526	128	
	5,780,659	7/14/1998	Schmid et al.	556	11	

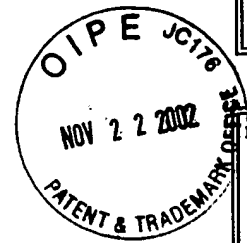
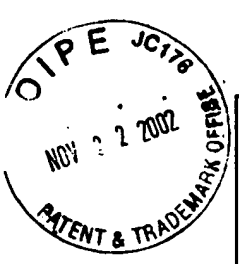
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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EXAMINER INITIAL	DOCUMENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE or 102(e) DATE IF APPROPRIATE
	5,824,620	10/20/1998	Vega et al.	502	117	
	5,861,352	1/19/1999	Gila et al.	502	155	
	5,892,079	4/6/1999	Wilson, Jr.	556	11	
	5,914,044	6/22/1999	Lindoy et al.	210	670	
	5,977,392	11/2/1999	Royo et al.	556	11	
	5,986,025	11/16/1999	Huh et al.	526	119	
	6,087,293	7/11/2000	Carnahan et al.	502	158	
	6,114,555	9/5/2000	Llinás et al.	556	11	
	6,133,187	10/17/2000	Vega et al.	502	103	

**WORLD INTELLECTUAL PROPERTY ORGANIZATION DOCUMENTS**

DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	PCT INTERNATIONAL FILING DATE	TRANSLATION YES/NO
92/05203	4/2/1992	WO	9/13/1991	
94/03506	2/17/1994	WO	8/5/1993	
94/07928	4/14/1994	WO	9/30/1993	

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## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO
	10 22 382	1/1958	DE			no
	26 08 863 C2	8/9/1977	DE			no
	0 260 130	3/16/1988	EP			
	0 277 004	8/3/1988	EP			
	0 314 797	5/10/1989	EP			
	0 323 716	7/12/1989	EP			
	0 336 593	10/11/1989	EP			
	0 361 866	4/4/1990	EP			
	0 367 503	5/9/1990	EP			
	0 368 644	5/16/1990	EP			
	0 416 815	3/13/1991	EP			
	0 420 436	4/3/1991	EP			
	0 426 637	5/8/1991	EP			
	0 474 391	3/11/1992	EP			
	0 633 272	1/11/1995	EP			
	0 668 295	8/23/1995	EP			

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Chien, J.C.W., et al., "Olefin Copolymerization with Metallocene Catalysts. III. Metallocene/Methylaluminoxane Catalyst for Olefin Copolymerization," <i>Journal of Polymer Science, Part A: Polymer Chemistry</i> , Vol. 29, pp 1603-1607 (1991).
	Chien, J.C.W., et al., "Olefin Copolymerization with Metallocene Catalysts. IV. Supported Metallocene/Methylaluminoxane Catalyzed Olefin Terpolymerization," <i>Journal of Polymer Science, Part A: Polymer Chemistry</i> , Vol. 29, pp 1609-1613 (1991).
	Chien, J.C.W., et al., "Zirconocenium Cation Catalysis of Propene Polymerization," <i>Makromol. Chem., Macromol. Symp.</i> , Vol. 66, pp 141-156 (1993).
	Cihlár, J., et al., "Influence of Water on Ethylene Polymerization Catalyzed by Titanocene Systems," <i>Makromol. Chem.</i> , Vol. 179, pp 2553-2558 (1978).
	Ciruelos, S., et al., "New Silyl-Substituted Cyclopentadienyl Titanium and Zirconium Complexes. X-ray Molecular Structures of [TiCl <sub>2</sub> {μ-[(n <sup>5</sup> -C <sub>5</sub> H <sub>4</sub> )SiMe <sub>2</sub> OsiMe <sub>2</sub> (n <sup>5</sup> -C <sub>5</sub> H <sub>4</sub> )]}], " <i>Organometallics</i> , Vol. 14, pp 177-185 (1995).
	Collins, S., et al., "Polymerization of Propylene Using Supported, Chiral, ansa-Metallocene Catalysts: Production of Polypropylene with Narrow Molecular Weight Distributions," <i>Macromolecules</i> , Vol. 25, pp 1780-1785 (1992).
	Reichert, K.H., et al., "Zur Kinetik der Niederdruckpolymerisation von Äthylen mit löslichen Ziegler-Katalysatoren," <i>Die makromolekulare Chemie</i> , Vol. 169, pp 163-176 (1973).
	Sinn, H., et al., "Ziegler-Natta Catalysis," <i>Advances in Organometallic Chemistry</i> , Vol. 18, pp 99-149 (1980).

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